IN THE SPECIFICATION

BRIEF DESCRIPTION OF THE DRAWINGS

Please amend the paragraph titled "BRIEF DESCRIPTION OF THE DRAWINGS" shown on page 6, as follows:

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate an embodiment of the invention, and, together with the description, serve to explain the principles of the invention:

~~FIG. 1 shows a general multi-stage hybrid interference canceller;~~

FIG. ~~2~~ 1 shows an interference cancellation unit forming the general multi-stage hybrid interference canceller;

FIG. 2 shows a general multi-stage hybrid interference canceller;

FIG. 3 shows a configuration of a hybrid multi-user interference canceller according to a preferred embodiment of the present invention;

FIG. 4 shows a clustering method on the dynamic programming basis according to a preferred embodiment of the present invention;

FIG. 5 shows a trellis diagram for calculating the clustering method when the number of clusters is established according to a preferred embodiment of the present invention; and

FIG. 6 shows a trellis diagram for calculating the clustering method when the number of clusters is not established according to a preferred embodiment of the present invention.

THE DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please amend THE DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS as follows:

The fifth paragraph on page 8, line 22, as follows:

FIG. 1 shows an ICU 100 on the g^{th} cluster in the m^{th} stage.

The last paragraph on page 8, continuing to page 9:

In detail, the lower subscript in the X_g-type variable indicates a cluster factor, and the first lower subscript in the $X_{m,g}$-type variable is a factor for representing a stage while the second lower subscript is a factor for showing a cluster. An input is a residual signal component $e_{m,g}$ 101 obtained by canceling estimate signals of users who belong to a previous cluster from the receive signal. Signal estimation of a user who belongs to the current cluster is performed by ~~a matched filter A_g~~ a matched filter A_g^T.

The first full paragraph on page 9, starting on line 7, as follows:

A transformation matrix F_g 104 represents parallel interference cancellers of users who belong to a cluster. Signals of users from which interference is cancelled by the parallel interference canceller are given as $y'_{m,g}$ 105, and as to decision on the signals of users within a cluster in each stage, soft decision 108 is performed on the addition 107 of $y'_{m,g}$ to $y_{m-1,g}$ 106 which is a result 104 of a previous stage.

The first full paragraph on page 20, as follows:

The K-average clustering method is an optimization method for generating a cluster 401 so that the elements 402 (signal power intensities) belonging to each cluster may differ less from a central value or a mean value, FIG. 4 showing an exemplified case thereof.

The third paragraph on page 20, as follows:

First, when an object function is calculated with the sum of squared errors, and a set S including n samples of ~~x1, x2, . . . , x_n~~ $x_1, x_2, \ldots, x_n$ is divided into K subsets $s_1, s_2, \ldots, s_k$, if n_i is a number of samples of the subset s_i, and m_i is a mean value of the samples belonging to the subset s_i, Equation 18 is provided.